

Application No. 10/020,922

Art Unit 1772

February 27, 2004

Reply to Office Action of December 1, 2003

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. **(Currently Amended)** A sealant for polypropylene consisting essentially of a composition comprising:

a high-pressure-processed low-density polyethylene (A) having a density (measured in accordance with ASTM D 1505) of 910 to 930 kg/m<sup>3</sup> and a melt flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238) of 0.5 to 20 g/10 min, and

an ethylene/ $\alpha$ -olefin copolymer (B) having a density (measured in accordance with ASTM D 1505) of 860 to less than 890 kg/m<sup>3</sup>, a melt flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238), MFR<sub>2.16</sub>, of 0.5 to 40 g/10 min and a molecular weight distribution (Mw/Mn) determined by gel permeation chromatography (GPC) of 1.5 to 3, obtained from ethylene and an  $\alpha$ -olefin having 3 to 10 carbon atoms, or

both of the ethylene/ $\alpha$ -olefin copolymer (B) and a linear low-density polyethylene (C), wherein said linear low-density polyethylene (C) has a linear low-density polyethylene (C) having a density (measured in accordance with ASTM D 1505) of 890 to 940 kg/m<sup>3</sup> and a

Application No. 10/020,922

Art Unit 1772

February 27, 2004

Reply to Office Action of December 1, 2003

melt flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238) of 0.2 to 30 g/10 min, obtained from ethylene and an  $\alpha$ -olefin having 3 to 10 carbon atoms, ~~or~~

~~both of said ethylene/ $\alpha$ -olefin copolymer (B) and said linear low-density polyethylene (C);~~ atoms;

wherein, in the composition, the high-pressure-processed low-density polyethylene (A) is contained in an amount of 10 to 85% by weight, the ethylene/ $\alpha$ -olefin copolymer (B) is contained in an amount of 10% to less than 50% by weight, and the ethylene/ $\alpha$ -olefin copolymer (B), ~~the linear low-density polyethylene (C),~~ or said ethylene/ $\alpha$ -olefin copolymer (B) and said linear low-density polyethylene (C) are contained in a total amount of 15 to 90% by weight, based on the total weight of high-pressure-processed low-density polyethylene (A), ethylene/ $\alpha$ -olefin copolymer (B) and linear low-density polyethylene (C),

which composition exhibits a melt flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238) of 1 to 15 g/10 min and a melt tension (MT) measured at 190°C of 5 to 100 mN.

2. **(Previously Presented)** The sealant for polypropylene as claimed in claim 1, wherein said sealant comprises said ethylene/ $\alpha$ -olefin copolymer (B), and the ethylene/ $\alpha$ -olefin copolymer (B) has a ratio,  $MFR_{10}/MFR_{2.16}$ , of melt flow rate (measured under a load of 10

**Application No. 10/020,922**

**Art Unit 1772**

**February 27, 2004**

**Reply to Office Action of December 1, 2003**

kg at 190°C in accordance with ASTM D 1238), MFR<sub>10</sub>, to melt flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238), MFR<sub>2.16</sub>, of 5 to 20.

3. **(Currently Amended)** The sealant for polypropylene as claimed in claim 1, ~~or 2~~, wherein the molecular weight distribution (Mw/Mn) determined by GPC of the linear low-density polyethylene (C), is in the range of 1.5 to 5.

4. **(Currently Amended)** A ~~hermetically~~ sealed package openable by peeling and comprising a sealant laminate having a structure such that one side of a sealant layer (I) consisting essentially of a sealant for polypropylene is overlaid with a resin layer of polypropylene (II) by heat sealing lamination;

wherein the sealant for polypropylene consists essentially of a composition comprising:

a high-pressure-processed low-density polyethylene (A) having a density (measured in accordance with ASTM D 1505) of 910 to 930 kg/m<sup>3</sup> and a melt flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238) of 0.5 to 20 g/10 min, and

an ethylene/ $\alpha$ -olefin copolymer (B) having a density (measured in accordance with ASTM D 1505) of 860 to less than 890 kg/m<sup>3</sup>, a melt

**Application No. 10/020,922**

**Art Unit 1772**

**February 27, 2004**

**Reply to Office Action of December 1, 2003**

flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238), MFR<sub>2.16</sub>, of 0.5 to 40 g/10 min and a molecular weight distribution (Mw/Mn) determined by gel permeation chromatography (GPC) of 1.5 to 3, obtained from ethylene and an  $\alpha$ -olefin having 3 to 10 carbon atoms, or

both of the ethylene/ $\alpha$ -olefin copolymer (B) and a linear low-density polyethylene (C), wherein said linear low-density polyethylene (C) has a linear low-density polyethylene (C) having a density (measured in accordance with ASTM D 1505) of 890 to 940 kg/m<sup>3</sup> and a melt flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238) of 0.2 to 30 g/10 min, obtained from ethylene and an  $\alpha$ -olefin having 3 to 10 carbon atoms, ~~or~~

~~both of said ethylene/ $\alpha$ -olefin copolymer (B) and said linear low-density polyethylene (C); atoms;~~

wherein, in the composition, the high-pressure-processed low-density polyethylene (A) is contained in an amount of 10 to 85% by weight, the ethylene/ $\alpha$ -olefin copolymer (B) is contained in an amount of 10% to less than 50% by weight, ~~weight or less~~, and the ethylene/ $\alpha$ -olefin copolymer (B), ~~the linear low-density polyethylene (C),~~ or said ethylene/ $\alpha$ -olefin copolymer (B) and said linear low-density polyethylene (C) are contained in a total amount of 15 to 90% by weight, based on the total weight of high-pressure-processed low-

**Application No. 10/020,922**

**Art Unit 1772**

**February 27, 2004**

**Reply to Office Action of December 1, 2003**

density polyethylene (A), ethylene/ $\alpha$ -olefin copolymer (B) and linear low-density polyethylene (C),

wherein said composition exhibits a melt flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238) of 1 to 15 g/10 min and a melt tension (MT) measured at 190°C of 5 to 100 mN.

5. **(Currently Amended)** The ~~hermetically~~ sealed package as claimed in claim 4, wherein the laminate has a structure such that another side, opposite to the side overlaid with the resin layer of polypropylene (II), of the sealant layer (I) is overlaid with a base layer (III) of a member selected from the group consisting of a polyester, a polyamide, a metallized film, an aluminum foil and a polyolefin by laminating, and wherein the sealant layer (I) has a thickness of 5 to 10  $\mu\text{m}$ .

6. **(Currently Amended)** The ~~hermetically~~ sealed package as claimed in claim 5, wherein the base layer (III) is laminated with the sealant layer (I) consisting essentially of the sealant for polypropylene by extrusion laminating.

7. **(Currently Amended)** The ~~hermetically~~ sealed package as claimed in claim 4, wherein the sealant layer (I) consisting essentially of

the sealant for polypropylene is formed by inflation molding or cast molding.

8. **(Currently Amended)** A ~~hermetically~~ sealed package openable by peeling and comprising a cover of a laminate and a cup of a resin layer of polypropylene (II),

wherein said laminate has a structure such that one side of a sealant layer (I) consisting essentially of a sealant for polypropylene is overlaid with a resin layer of polypropylene (II) by laminating;

such that another side, opposite to the side overlaid with the resin layer of polypropylene (II), of the sealant layer (I) is overlaid by laminating with a base layer (III), said base layer (III) is selected from the group consisting of a polyester, a polyamide, a metallized film, an aluminum foil and a polyolefin;

said base layer (III) and said sealant layer (I) each having a thickness of 5 to 100  $\mu\text{m}$ ;

wherein the sealant for polypropylene consists essentially of a composition comprising:

a high-pressure-processed low-density polyethylene (A) having a density (measured in accordance with ASTM D 1505) of 910 to 930  $\text{kg/m}^3$  and a melt flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238) of 0.5 to 20 g/10 min, and

**Application No. 10/020,922**

**Art Unit 1772**

**February 27, 2004**

**Reply to Office Action of December 1, 2003**

an ethylene/ $\alpha$ -olefin copolymer (B) having a density (measured in accordance with ASTM D 1505) of 860 to less than 890 kg/m<sup>3</sup>, a melt flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238), MFR<sub>2.16</sub>, of 0.5 to 40 g/10 min and a molecular weight distribution (Mw/Mn) determined by gel permeation chromatography (GPC) of 1.5 to 3, obtained from ethylene and an  $\alpha$ -olefin having 3 to 10 carbon atoms, or

both of the ethylene/ $\alpha$ -olefin copolymer (B) and a linear low-density polyethylene (C), wherein said linear low-density polyethylene (C) has a linear low-density polyethylene (C) having a density (measured in accordance with ASTM D 1505) of 890 to 940 kg/m<sup>3</sup> and a melt flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238) of 0.2 to 30 g/10 min, obtained from ethylene and an  $\alpha$ -olefin having 3 to 10 carbon atoms, or  
~~both of said ethylene/ $\alpha$ -olefin copolymer (B) and said linear low-density polyethylene (C);~~ atoms;

wherein, in the composition, the high-pressure-processed low-density polyethylene (A) is contained in an amount of 10 to 85% by weight, the ethylene/ $\alpha$ -olefin copolymer (B) is contained in an amount of 10% to less than 50% by weight, ~~weight or less~~, and the ethylene/ $\alpha$ -olefin copolymer (B), ~~the linear low-density polyethylene (C),~~ or said ethylene/ $\alpha$ -olefin copolymer (B) and said linear low-density

**Application No. 10/020,922**

**Art Unit 1772**

**February 27, 2004**

**Reply to Office Action of December 1, 2003**

polyethylene (C) are contained in a total amount of 15 to 90% by weight, based on the total weight of high-pressure-processed low-density polyethylene (A), ethylene/ $\alpha$ -olefin copolymer (B) and linear low-density polyethylene (C),

wherein said composition exhibits a melt flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238) of 1 to 15 g/10 min and a melt tension (MT) measured at 190°C of 5 to 100 mN.

9. **(Previously Presented)** The sealant for polypropylene as claimed in claim 1, wherein said composition comprises both the ethylene/ $\alpha$ -olefin copolymer (B) and the linear low-density polyethylene (C).

10. **(Currently Amended)** The ~~hermetically~~ sealed package as claimed in claim 5, wherein the resin layer of polypropylene (II) is in the form of ~~the~~ a cup, and the sealant layer (I) and the base layer (III) form a cover of a laminate.

11. **(Currently Amended)** The ~~hermetically~~ sealed package as claimed in claim 10, wherein said sealant layer (I) and said base layer (III) each have a thickness of 5 to 100  $\mu$ m.



12. **(Currently Amended)** A ~~hermetically~~ sealed package openable by peeling and comprising a cover of laminate and a cup of a resin layer of polypropylene (II),

said cover of laminate having a structure such that one side of a sealant layer (I) consisting essentially of a sealant for polypropylene is overlaid with a base layer (III) of a member selected from among a polyester, a polyamide, a metallized film, an aluminum foil and a polyolefin, said base layer (III) and said sealant layer (I) each having a thickness of 5 to 100  $\mu\text{m}$ ,

said cup of a resin layer of polypropylene (II) is overlaid with said cover of laminate faced on the side of sealant layer (I) by heat sealing lamination;

wherein the sealant for polypropylene consists essentially of a composition comprising:

a high-pressure-processed low-density polyethylene (A) having a density (measured in accordance with ASTM D 1505) of 910 to 930  $\text{kg/m}^3$  and a melt flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238) of 0.5 to 20 g/10 min, and

an ethylene/ $\alpha$ -olefin copolymer (B) having a density (measured in accordance with ASTM D 1505) of 860 to less than 890  $\text{kg/m}^3$ , a melt flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238),  $\text{MFR}_{2.16}$ , of 0.5 to 40 g/10 min and a molecular weight distribution ( $\text{Mw/Mn}$ ) determined by gel permeation

**Application No. 10/020,922**

**Art Unit 1772**

**February 27, 2004**

**Reply to Office Action of December 1, 2003**

chromatography (GPC) of 1.5 to 3, obtained from ethylene and an  $\alpha$ -olefin having 3 to 10 carbon atoms, or

both of the ethylene/ $\alpha$ -olefin copolymer (B) and a linear low-density polyethylene (C), wherein said linear low-density polyethylene (C) has a linear low-density polyethylene (C) having a density (measured in accordance with ASTM D 1505) of 890 to 940 kg/m<sup>3</sup> and a melt flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238) of 0.2 to 30 g/10 min, obtained from ethylene and an  $\alpha$ -olefin having 3 to 10 carbon atoms, ~~or~~

~~both of said ethylene/ $\alpha$ -olefin copolymer (B) and said linear low-density polyethylene (C);~~ atoms;

wherein, in the composition, the high-pressure-processed low-density polyethylene (A) is contained in an amount of 10 to 85% by weight, the ethylene/ $\alpha$ -olefin copolymer (B) is contained in an amount of 10% to less than 50% by weight, ~~weight or less~~, and the ethylene/ $\alpha$ -olefin copolymer (B), ~~the linear low-density polyethylene (C),~~ or said ethylene/ $\alpha$ -olefin copolymer (B) and said linear low-density polyethylene (C) are contained in a total amount of 15 to 90% by weight, based on the total weight of high-pressure-processed low-density polyethylene (A), ethylene/ $\alpha$ -olefin copolymer (B) and linear low-density polyethylene (C),

wherein said composition exhibits a melt flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238) of 1

**Application No. 10/020,922**

**Art Unit 1772**

**February 27, 2004**

**Reply to Office Action of December 1, 2003**

to 15 g/10 min and a melt tension (MT) measured at 190°C of 5 to 100 mN.

13. **(Currently Amended)** A ~~hermetically~~ sealed package openable by peeling and comprising a laminate having a structure such that one side of a sealant layer (I) consisting essentially of the sealant for polypropylene as claimed in claim 1 is overlaid with a resin layer of polypropylene (II) by heat sealing lamination.

14. **(Currently Amended)** The ~~hermetically~~ sealed package as claimed in claim 4, wherein the laminate has a structure such that another side, opposite to the side overlaid with the resin layer of polypropylene (II), of the sealant layer (I) is overlaid with a base layer (III) of a member selected from the group consisting of a polyester, a polyamide, a metallized film, an aluminum foil and a polyolefin by laminating, and wherein the sealant layer (I) has a thickness of 5 to 10  $\mu\text{m}$ .

15. **(Currently Amended)** The ~~hermetically~~ sealed package as claimed in claim 5, wherein the base layer (III) is laminated with the sealant layer (I) consisting essentially of the sealant for polypropylene as claimed in claim 1 by extrusion laminating.

16. **(Currently Amended)** The ~~hermetically~~ sealed package as claimed in claim 4, wherein the sealant layer (I) consisting essentially of the sealant for polypropylene as claimed in claim 1 is formed by inflation molding or cast molding.

17. **(Currently Amended)** A ~~hermetically~~ sealed package openable by peeling and comprising a cover of a laminate and a cup of a resin layer of polypropylene (II),

wherein said laminate has a structure such that one side of a sealant layer (I) consisting essentially of a sealant for polypropylene is overlaid with a resin layer of polypropylene (II) by laminating; and

such that another side, opposite to the side overlaid with the resin layer of polypropylene (II), of the sealant layer (I) is overlaid by laminating with a base layer (III), said base layer (III) is selected from a polyester, a polyamide, a metallized film, an the group consisting of aluminum foil and a polyolefin;

said base layer (III) and said sealant layer (I) each having a thickness of 5 to 100  $\mu\text{m}$ ;

wherein the sealant for polypropylene consists essentially of a composition comprising:

a high-pressure-processed low-density polyethylene (A) having a density (measured in accordance with ASTM D 1505) of 910 to 930  $\text{kg/m}^3$

**Application No. 10/020,922**

**Art Unit 1772**

**February 27, 2004**

**Reply to Office Action of December 1, 2003**

and a melt flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238) of 0.5 to 20 g/10 min, and

an ethylene/ $\alpha$ -olefin copolymer (B) having a density (measured in accordance with ASTM D 1505) of 860 to less than 890 kg/m<sup>3</sup>, a melt flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238), MFR<sub>2.16</sub>, of 0.5 to 40 g/10 min and a molecular weight distribution (Mw/Mn) determined by gel permeation chromatography (GPC) of 1.5 to 3, obtained from ethylene and an  $\alpha$ -olefin having 3 to 10 carbon atoms, or

both of the ethylene/ $\alpha$ -olefin copolymer (B) and a linear low-density polyethylene (C), wherein said linear low-density polyethylene (C) has a linear low-density polyethylene (C) having a density (measured in accordance with ASTM D 1505) of 890 to 940 kg/m<sup>3</sup> and a melt flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238) of 0.2 to 30 g/10 min, obtained from ethylene and an  $\alpha$ -olefin having 3 to 10 carbon atoms, ~~or~~

~~both of said ethylene/ $\alpha$ -olefin copolymer (B) and said linear low-density polyethylene (C);~~ atoms;

wherein, in the composition, the high-pressure-processed low-density polyethylene (A) is contained in an amount of 10 to 85% by weight, the ethylene/ $\alpha$ -olefin copolymer (B) is contained in an amount of 10% to less than 50% by weight, ~~weight or less~~, and the ethylene/ $\alpha$ -

Application No. 10/020,922

Art Unit 1772

February 27, 2004

Reply to Office Action of December 1, 2003

olefin copolymer (B), ~~the linear low-density polyethylene (C),~~ or said ethylene/ $\alpha$ -olefin copolymer (B) and said linear low-density polyethylene (C) are contained in a total amount of 15 to 90% by weight, based on the total weight of high-pressure-processed low-density polyethylene (A), ethylene/ $\alpha$ -olefin copolymer (B) and linear low-density polyethylene (C),

wherein said composition exhibits a melt flow rate (measured under a load of 2.16 kg at 190°C in accordance with ASTM D 1238) of 1 to 15 g/10 min and a melt tension (MT) measured at 190°C of 5 to 100 mN.

18. **(Currently Amended)** The ~~hermetically~~ sealed package as claimed in claim 5, wherein the resin layer of polypropylene (II) is in the form of ~~the~~ a cup, the sealant layer (I) and the base layer (III) form a cover of a laminate.

19. **(Currently Amended)** The ~~hermetically~~ sealed package as claimed in claim 10, said sealant layer (I) and said base layer (III) each having a thickness of 5 to 100  $\mu\text{m}$ .

20. **(Currently Amended)** A ~~hermetically~~ sealed package openable by peeling and comprising a cover of laminate and a cup of a resin layer of polypropylene (II),

**Application No. 10/020,922**

**Art Unit 1772**

**February 27, 2004**

**Reply to Office Action of December 1, 2003**

said cover of laminate having a structure such that one side of a sealant layer (I) consisting essentially of a sealant for polypropylene as claimed in claim 1 is overlaid with a base layer (III) of a member selected from among a polyester, a polyamide, a metallized film, an aluminum foil and a polyolefin, said base layer (III) and said sealant layer (I) each having a thickness of 5 to 100  $\mu\text{m}$ ,

said cup of a resin layer of polypropylene (II) is overlaid with said cover of laminate faced on the side of sealant layer (I) by heat sealing laminating.